
ON-SITE RPA DETERMINATIONS



Chesapeake Bay Local Assistance Department
Commonwealth of Virginia



Background

- CBPA maps intended to be general
- Map scale inappropriate for zoning
- Maps based upon readily available info
- USGS maps not accurate
- Field conditions often reveal opposite from USGS maps



RPA Definition/Designation Criteria

New RPA definition/designation criteria replaces:

- “lands at or near the shoreline”
- “tributary stream”



RPA Definition

“Resource Protection Area” means that component of the CBPA comprised of **lands adjacent to water bodies with perennial flow** that have an intrinsic water quality value due to the ecological and biological processes they perform or are sensitive to impacts, which may result in significant degradation to the quality of state waters.



Designation Criteria 9 VAC 10-20-80 RPAs

- Nontidal wetlands connected by surface flow and contiguous to tidal wetlands or water bodies with **perennial flow**.
- A buffer area not < 100' in width located adjacent to and landward of other RPA components and along both sides of any water body with **perennial flow**.



Designation Criteria: 9 VAC 10-20-105

Site-specific Refinement of CBPA Boundaries

During POD/WQIA review, local governments shall ensure or confirm that:

- Reliable site-specific evaluation is conducted to determine whether water bodies on or adjacent to the development site have **perennial flow**, and
- RPA boundaries are adjusted, based on this evaluation of the site.



Designation Criteria: 9 VAC 10-20-105

Site-specific Refinement of CBPA Boundaries

- Local governments may conduct site evaluations themselves;
- or
- Require person applying to use or develop the site to conduct the evaluation and submit the required information for review.



Perennial Stream Determinations Field Protocol

- VIMS, VCU, GMU Contracts
- Field testing
- Based on NC DWQ protocol
- Tentative Completion: July 2002
- **NOT** Mandatory



Field Protocol Evaluation

- Intermittent/Perennial Stream Distinctions
- Presence/Absence of Physical and Biological Characteristics
- Preponderance of Evidence
- Corroboration With Other Info/Data
- Field Data and Evaluation Forms



Field Protocol Elements: Geomorphology

- Riffle/pools
- Substrate texture
- Natural levees
- Sinuosity
- Floodplain
- Braided channels
- Alluvial deposits

- Bench/undercut
- Bed/bank
- $\geq 2^{\text{nd}}$ Order stream
- Head cut
- Grade control point
- Surrounding topo



Field Protocol Elements: Hydrology

- Groundwater (seeps, water table)
 - Leaf litter presence
 - Sediment/debris
 - Wrack lines
- Water in channel > 48 hrs after rain
 - Water in channel during dry weather
 - Redox-morphic conditions in sides of channel/headcut



Field Protocol Elements: Biology

- Fibrous roots in streambed
 - Aquatic or wetland plants
 - Periphyton
 - Bivalves
 - Fish
- Amphibians
 - Aquatic turtles
 - Crayfish
 - Macrobenthos
 - Iron oxidizing bacteria/fungus
 - Filamentous algae



Corroborative Information

- Precipitation (Daily, M-T-D, Y-T-D)
- Piezometer Data
- Photographic Documentation (dates)
- Weir Measurements (with photos)
- Anecdotal Info (use with caution)

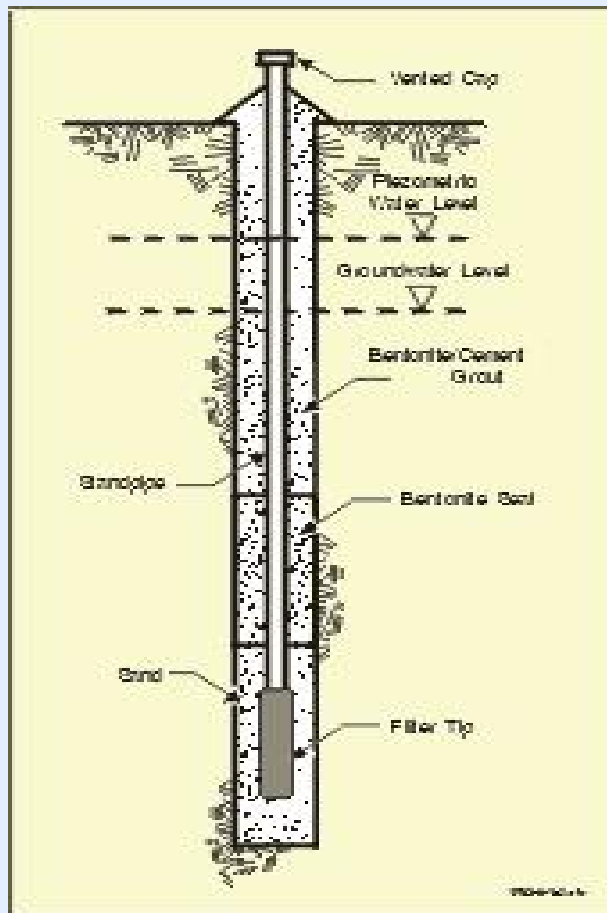


Precipitation Data Sources

- Daily Newspapers
- NWS Wakefield
(<http://www.erh.noaa.gov/er/akq/>)
- Wash. DC Area
(<http://www.erh.noaa.gov/er/lwx/>)
- National Climatic Data Center
(<http://lwf.ncdc.noaa.gov/oa/ncdc.html>)
- VA Climatology Office
(<http://climate.virginia.edu/>)



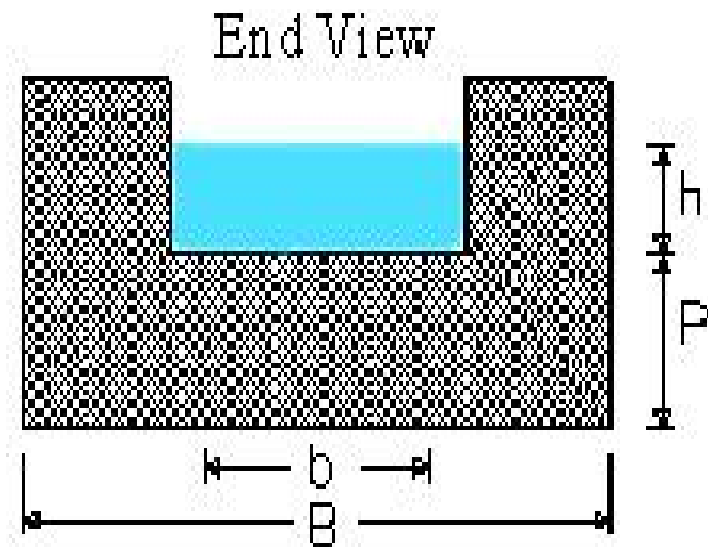
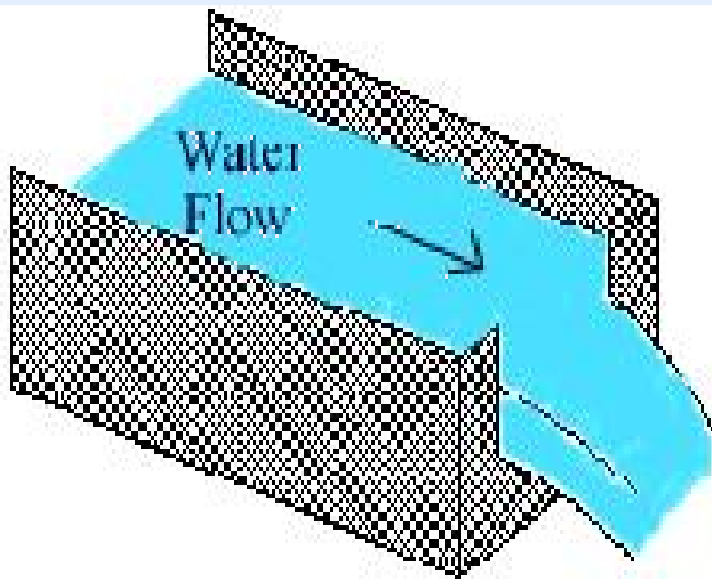
Piezometer Data



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Weir Measurements



Photographic Documentation



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Anecdotal Information: Caution



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Using Corroborative Information

Stream Likely to be Intermittent or Ephemeral if:

- Stream has no flow
- Normal Rainfall Year/Month
- Recent rainfall



Using Corroborative Information

- Stream Likely Perennial if:
 - Stream has flow
 - Drought conditions exist
 - No recent rainfall



Problem Areas

- Urban vs. rural watershed differences
- Coastal vs. Piedmont streams
- Effects of good vs. poor water quality
- Seasonal differences, climatic events
- Streams originating from springs
- Ditches
- Partially storm-sewered streams



What Not to Use

❌ 7Q10, 7Q30

❌ Regression Analyses Based on
Gaged Stream Data

****** Never use in lieu of on site evaluation
and other corroborative information

Questions????????????

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